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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/615,092

07/07/2003

Koji Kawano

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EXAMINER

SIPPLE IV, EDWARD C

ART UNIT

PAPER NUMBER

2609

NOTIFICATION DATE

DELIVERY MODE

08/16/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/615,092	Applicant(s) KAWANO ET AL.	
	Examiner Edward C. Sipple IV	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/07/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)--- | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/07/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10615092, filed on 07/07/2003. No benefit for foreign priority under 35 U.S.C. 119(a)-(d) can be given due to the lack of a certified English translation of the foreign application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 6-8, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art - AAPA (spec. pages 1-4, lines 12-36 and figures 4 and 5) in view of (Matsuura U.S. Patent No. 6,131,023).

Regarding Claim 1, AAPA discloses a CATV tuner (spec. page1 lines 10-14) comprising:

an input circuit connected to an input terminal (spec. page 1 lines 12-16) for transmitting (spec. page 2 lines 9-13) and receiving (spec. page 1 lines 12-17)

a signal to and from a CATV station the input circuit including an upstream-signal input terminal (spec. page 2 lines 11-15), a distributor (spec. page 2 lines 21-25), an amplifier (figure 5 element 16), and a downstream-signal output terminal (spec. page 2 lines 26-29);

a first mixer circuit for mixing an output signal from the input circuit (spec page 1 lines 15-19) and a first local-oscillation signal (spec. page 1 lines 18-22) so as to generate a first IF signal (spec. page 1 lines 21-25);

a first oscillation circuit for transmitting the first local-oscillation signal to the first mixer circuit (spec. page 1 lines 18-22)

a first IF circuit for processing the first IF signal; (spec. page 1 lines 23-26);

a second mixer circuit for mixing an output signal from the first IF circuit (spec. page 1 lines 26-30) and a second local-oscillation signal (spec. page 1 lines 29-33) so as to generate a second IF signal (spec. page 1 lines 31-34);
and

a second oscillation circuit for transmitting the second local-oscillation signal to the second mixer circuit; (spec. page 1 lines 26-32) and

a second IF circuit for processing the second IF signal (spec. page 1 lines 32-36);

wherein at least one upstream signal is input to the upstream-signal input terminal so as to be transmitted to the CATV station (spec. page 2 lines 10-14), the distributor distributes a reception signal to generate distributed signals and

transmits one of the distributed signals to the downstream-signal output terminal as a downstream signal so that the downstream signal is output therefrom (spec. page 2 lines 26-32)

The AAPA does not teach:

the amplifier is arranged between the distributor and the downstream-signal output terminal so as to amplify the downstream signal, and the low-pass filter is arranged between the distributor and the amplifier so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal.

Matsuura teaches:

the amplifier is arranged between the distributor and the downstream-signal output terminal (fig. 1 elements 35, 46 and 52) so as to amplify the downstream signal (paragraph 8 Lines 40-44), and the low-pass filter is arranged between the distributor and the amplifier (fig.1 elements 46, 51 and 52) so as to remove a CATV signal having a frequency that is higher than a predetermined upper limit frequency of the downstream signal (element 51 is capable of removing unwanted frequencies, see paragraph 8 lines 34-36).

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to incorporate the low-pass-filter and amplifier arrangement described by Matsuura within the device described by AAPA.

The motivation would be to prevent frequencies that are too high or from entering the downstream signal amplifier and to shorten the low-level signal input path to the downstream signal amplifier, thus reducing noise and interference. A prime factor in the design process of a tuner circuit is to reduce noise and improve signal quality; an explicit example can be seen in (Moon U.S. Patent No. 4,520,507, col. 3 lines 15-20).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art - AAPA (spec. pages 1-4, lines 12-36 and figures 4 and 5) in view of (Matsuura U.S. Patent No. 6,131,023) as applied to claim 1 above.

The prior art applied to claim 1 does not teach:

further comprising a tuner case having the input circuit provided therein.

Official notice is taken that it is well known in the art to incorporate circuits within a housing or case.

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to insert the complete circuit within a case as to provide a convenient structure for the device.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art - AAPA (spec. pages 1-4, lines 12-36 and figures 4 and 5) in view of (Matsuura U.S. Patent No. 6,131,023) as applied to claim 1 above.

AAPA (spec. pages 1-4, lines 12-36 and figures 4 and 5) further discloses:

wherein an output from one end of the distributor is transmitted to the downstream-signal output terminal (spec. page 2 lines 26-31)

Prior art applied to claim 1 above does not teach:

Via the low-pass filter and the amplifier

Official notice is taken that it is well known in the art to incorporate previously external components within a circuit.

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to insert a low-pass filter and an amplifier as to amplify the signal received by the downstream signal output terminal.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art - AAPA (spec. pages 1-4, lines 12-36 and figures 4 and 5) in view of (Matsuura U.S. Patent No. 6,131,023) as applied to claim 1 above.

The AAPA further discloses:

wherein an output from one end of the distributor is subjected to processing and transmitted to the first mixer circuit (spec. page 2 lines 23-26).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art - AAPA (spec. pages 1-4, lines 12-36 and figures 4 and 5) in view of (Matsuura U.S. Patent No. 6,131,023) as applied to claims 1 and 6 above.

The admitted prior art applied to claims 1 and 6 does not teach:

wherein the amplifier is provided in the tuner case.

Official notice is taken that it is well known in the art to incorporate circuit components within a housing or case.

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to insert the amplifier within a case so as to prevent the need for a separate amplifier outside the CATV tuner.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art - AAPA (spec. pages 1-4, lines 12-36 and figures 4 and 5) in view of (Matsuura U.S. Patent No. 6,131,023) as applied to claim 1 above.

The prior art applied to claim 1 above does not teach:

wherein the low-pass filter functions as a matching circuit for making the downstream signal transmitted from the distributor suitable to be input to the amplifier.

Official notice is taken that it is well known in the art to select components that will provide suitable signals as input for subsequent components.

Therefore, at the time of the invention, it would have been obvious to a person of ordinary skill in the art to select a low-pass filter that makes the input signal to the downstream amplifier suitable as to provide the most appropriate input signal possible to the downstream signal amplifier.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art applied to claim 1 above, and further in view of (Shaw U.S. Patent # 5,953,043).

The prior art applied to claim 1 above does not teach:

a resistor arranged between the amplifier and the downstream-signal output terminal.

Shaw teaches:

a resistor arranged between the amplifier and the downstream-signal

output terminal (fig. 1A elements 18, 28 and 30, also paragraph 3 lines 52-55).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the resistor arrangement described by Shaw within the downstream signal circuit.

The motivation would have been to impedance match the amplifier output with the input of the set-top-box (See Shaw paragraph 3 lines 52-54).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art - AAPA (spec. pages 1-4, lines 12-36 and Figures 4 and 5) in view of (Matsuura U.S. Patent No. 6,131,023) as applied to claim 1 above, and further in view of (Sugiura U.S. Application # 09/800,276).

The prior art applied to claim 1 above does not teach:

a high-pass filter arranged between the distributor and the amplifier so as to block the upstream signal.

Sugiura teaches:

a high-pass filter arranged between the distributor and the amplifier (Fig. 2 Elements 16 and 18; note the junction above Element 16) so as to block the upstream signal (Paragraph [0054] Lines 4-7).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the circuit described in Claim 1 with the teachings of Sugiura by inserting a high-pass filter between the distributor and the downstream signal amplifier.

The motivation being to further block the upstream signal from reaching the downstream signal amplifier. Moreover, rearranging parts/components of an invention involves only routine skill in the art.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art applied to claim 2 above, and further in view of (Blumlein U.S. Patent No. 2,263,376).

The prior art applied to claim 2 above does not teach:

the high-pass filter and the low-pass filter define a band-pass filter

Blumlein teaches:

the high-pass filter and the low-pass filter define a band-pass filter (page 5, col. 9 lines 25-30)

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the teachings of Blumlein, and select a high pass filter and a low pass filter with overlapping frequencies as to define a band pass filter so as to

Art Unit: 2609

simultaneously block the CATV signal (frequency too high) and the upstream signal (frequency too low) from reaching the input to the downstream signal amplifier.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art applied to claim 2 above, and further in view of (Shaw U.S. Patent # 5,953,043).

The prior art applied to claim 2 above does not teach:

a resistor arranged between the amplifier and the downstream-signal output terminal.

Shaw teaches:

a resistor arranged between the amplifier and the downstream-signal output terminal (fig. 1A elements 18, 28 and 30, also paragraph 3 lines 52-55).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the resistor arrangement described by Shaw within the downstream signal circuit.

The motivation would have been to impedance match the amplifier output with the input of the set-top-box (See Shaw paragraph 3 lines 52-54).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward C. Sipple IV whose telephone number is 571 270 3414. The examiner can normally be reached on M-F 7:30-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Tran can be reached on 571 272 7305. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ES
08/01/2007



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